USF Net Neutrality Symposium 2008
Keynote Address of CPUC Commissioner Rachelle B. Chong
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Thank you for inviting me here to give a keynote address to this impressive symposium. I don't think it is any secret that I was a last minute invite. Like the last dinner guest invited to fill in the last singleton seat at the table, I am just happy to be here, amidst so many leading thinkers on the topic of Net Neutrality. It was incredibly kind to invite a government regulator – much like the awkward country cousin -- to the dinner party.

I must start with the usual disclaimer: The views I express today are my own, and not necessarily those of the California Public Utilities Commission.

Now, it just so happens that I recently published an essay on the "31 Flavors of Net Neutrality." Why did I write about Net Neutrality? Well, as this issue evolved from a geeky telecom issue to a bumper sticker election year phrase, I tried to figure out exactly what this Net Neutrality debate was all about. Yet when I asked people what what they meant by Net Neutrality, they gave me many different answers. So I concluded that Net Neutrality is like the Baskin-Robbins ice cream store. There are several flavors to appeal to various tastes. Whatever you want, we can serve it up in a Net Neutrality cone.

On the surface, Net Neutrality seems like an easy thing to swallow: an open and nondiscriminatory Internet where people get the content they want. But, once you delve deeper into the issues, the complexities of flavor are revealed, and it turns out Net Neutrality is something indigestible in quite a few forms.

Now, I have been incredibly blessed in my career to have served both at the Federal Communications Commission and now at the California Public Utilities Commission. You have heard of a serial killer; I am a serial regulator. I've been working in telecom regulation since 1984, starting with the introduction of wireless spectrum and being at the FCC during the Telecom Act of 1996. Given my perspective, I felt I could add something to the Net Neutrality debate.

Now some of your academic speakers are going to discuss Net Neutrality very eloquently in terms of economic theory, using phrases like "the economics of congestion" or my personal favorite, "the tragedy of the commons." Unlike them, I am going to simply say, "The Internet is a wonderfully vibrant and growing place, mostly because government kept its hands off it. Don't screw it all up by introducing a bunch of regulations."

You see, over a decade ago, I was an FCC Commissioner watching the birth of what was then quaintly known as the "Information Superhighway." Back then, the policy debate was focused on how to construct that Information Superhighway faster, cheaper, and more broadly throughout the country. Our government rather uncharacteristically restrained from regulating the early Internet.

Today, we've come a long way baby. We have robust and thriving information superhighways in most metropolitan areas. In 2006, California's legislature wisely passed a statewide franchise bill, unleashing billions of dollars of investment by AT&T and Verizon for fiber networks in our state. Cable has met the challenge and is offering triple plays of blazing fast Internet, voice and cable TV. There are more wireless phones than wireline phones in California, with wireless broadband becoming a reality.

The California Broadband Task Force just put out a report that 96% of California households have access to broadband. Yes, we have more to do to get broadband to the last 1.4 million residents and 2,000 mostly rural communities. But our lightly regulated and very competitive California telecommunications market has attracted strong investment in our state. Broadband is critical to our state's economic well being, and to our citizen's ability to be digitally literate at school and in the global workplace.

The point is, we've mostly got all the highways and roads built – and all types of traffic is flowing around the country quite nicely. Drivers on the Internet many options of what road to drive to get anywhere they want. We also have many different types of drivers: speedy race cars, family minivans, the occasional slow sedan, and the intimidating big-rigs that hog the road.

Some are saying, though, that we now need to regulate to make sure that all routes remain free for all drivers. Toll roads are bad; all roads should be free. Companies that discourage road hogs are bad; a teenager should be able to hog all the bandwidth in his neighborhood to download movies and play games. That's one way to frame the issue.

But, there's another way to frame the issues. Now that we have fast and efficient highways, should uniformed regulators prematurely step into the lanes to direct traffic flow, and issue extensive regulations on how the roads are to be maintained and where they should go? Should regulators create rules that may discourage some roads from being built? Doesn't the road builder already realize that people want the roads to go where they want them to go?

Well, before we introduce the highway cops into the equation, let's first make sure there is a real problem. That is my first major point. Second, if there is a problem, let's use the least restrictive method to resolve it, instead of skewing the vibrant Internet marketplace by imposing a 17th century common carrier scheme that imposes special rules on infrastructure and public carriers.

Regulatory Scheme

So how did we get to where we are. Let me first discuss for a minute the regulatory scheme.

Unlike the traditional common-carriage regulation of telephone networks, Congress and the FCC have taken a hands-off approach to the Internet. There are reasons for this. The telephone network historically was a monopoly. So, under Title II of the federal Communications Act, the FCC imposed common-carrier obligations on telecommunications. Common-carrier obligations require the telephone companies to offer telephone service on a nondiscriminatory basis. State public commissions similarly apply common carrier concepts to intrastate telephone services.

In contrast to telephone services, Internet communications and broadband internet access services are "information services." So, the FCC declined to apply Title II common carrier obligations to the Internet, or broadband networks. This is consistent with Congress' intent. Specifically, the Act states that it is U.S. policy to preserve the vibrant and competitive free market of the Internet -- and promote the continued development of the Internet.

Because the FCC classified Internet and broadband services as "information services," state commissions have no jurisdiction to apply common carrier rules in this area.

The FCC saw an early variation of the current Net Neutrality debate with the "open access" challenges to cable broadband networks. In the late Nineties, the ISPs had been using phone lines from telephone companies to provide dial-up Internet – remember those days? When cable companies started upgrading networks with broadband, the ISPs clamored to get access. The cable companies argued that they were not required to allow access to their networks. The FCC agreed. Specifically, the FCC classified cable modem service as an "information service" and not a regulated telecommunications service. The Supreme Court ultimately affirmed the FCC's position in 2005.

In 2005, the FCC also announced broadband policy principles in its Internet Policy Statement. The FCC statement outlined four policy principles of the Internet, subject to "reasonable network management."

- Consumers are entitled to access their choice of lawful Internet content
- Consumers are entitled to run applications and use services of their choice, subject to the needs of law enforcement
- Consumers can connect their choice of legal devices that do not harm the network
- Consumers are entitled to competition from ISPs and content providers

As I'll discuss later, the FCC has used these principles to step in where there have been market abuses. And I would argue that the FCC is the right entity to do it, and is doing a pretty decent job of it.

I believe that this "hands-off" regulatory approach, in fact, fueled the stunning growth and innovation of the Internet. It is my experience as an entrepreneur running an e-commerce retail site for over six years that really demonstrated to me the vitality of the Internet and its marketplace. Common carrier regulation has so far not been necessary to promote the growth of Internet services, products and applications. That's why I do not believe that applying common carrier regulations to the Internet makes an ounce of common sense.

The Many Flavors of Net Neutrality:
Flavor One: Content Neutrality

So what are the arguments *for* net neutrality? Let's try the first flavor of Net Neutrality. Traditionally, Net Neutrality meant the neutrality of Internet protocols – or "content neutrality" or "application neutrality" of the transport layer. Under this concept, the Internet was a "dumb network" that moved the bits of data from one computer to another.

Today, some Internet companies argue that, without Net Neutrality, network providers may charge a fee for specific content or content that comes from certain sources. This flavor of "net neutrality" is focused on ensuring customer access.

Flavor Two: Blocking and Rerouting

Now let's try the second flavor of Net Neutrality, involving blocking and rerouting. This focuses on the network side. The argument here is that broadband networks should not discriminate in favor of their own or affiliated content,

applications, or devices. These advocates are concerned with potential blocking or degrading of access by those who operate broadband networks.

For example, one net neutrality argument is that a broadband provider will block certain voice packets or ports to prevent certain data traffic from reaching its end user. Similar concerns are that a broadband provider will reroute traffic to avoid transport charges or block a rival's services.

Now, in 2005, the FCC investigated allegations that Madison River Telephone Co. was blocking ports used for rival Voice over Internet Protocol (VoIP) applications. In that investigation, the FCC reached a Consent Decree with Madison River. The Consent Decree established that Madison River would not block ports for traffic going to VoIP providers. Madison River also agreed to make a "voluntary" payment of $15,000 to the U.S. Treasury.

I cite this case because it shows how regulation can work effectively and swiftly, where necessary. It shows that the FCC is able and will enforce certain rights, even in the absence of laws or rules. I also want to note that, from the *network* side, the broadband provider does not have incentive to block access to content. Intermodal competition has given us options for broadband access. In this robustly competitive market, a network provider is not going to block content and risk alienating consumers. In my humble opinion, market forces will prevent this type of conduct. To the extent that there is market abuse, the FCC will investigate and seek corrective action.

Now, late last year, there were allegations that Comcast was degrading or limiting peer-to-peer applications, including BitTorrent. BitTorrent is both a company and a software application. BitTorrent offers services that include licensed movie downloads. There have been allegations that Comcast has been intentionally slowing peer to peer sharing in a way that made it very slow, and thus inconvenient, for users. Comcast has defended the practice as being legitimate network management that delays some downloads to ensure an acceptable experience for all users. Comcast has said it does not block any websites or online applications including peer-to-peer services.

As a result of these news reports, parties filed petitions at the FCC in November – one seeking a declaratory ruling that degrading peer-to-peer traffic violates the FCC's Internet Policy Statement. The other seeks a rulemaking on "reasonable network management practices." Two weeks ago, the FCC issued a notice seeking comment on these petitions. Again, I see the FCC acting promptly to discern whether there are abuses inconsistent with its Internet Policy Statement. If the practices are found to be consistent, the FCC can take appropriate action. Further, I

do believe it appropriate for the FCC to set forth with more clarity what is "reasonable network management practices."

The Third Flavor: Denying IP-Network Interconnection

Let's move to the third flavor of Net Neutrality. Net Neutrality advocates worry that a broadband network provider may refuse to link its network with other backbone providers. The competitive carriers are especially vocal about this point. They want broadband networks to submit to traditional common carrier interconnection rules, similar to the telephone network.

The government does not regulate the Internet as it does the public switched telephone network, and for good reason. The Internet is global and interstate without exact boundaries, unlike the landline telephone network. And, unlike the PSTN, there are many players that have built and developed broadband networks.

Some of these network providers are competitive carriers. Level 3 built an extensive broadband network during the dot com boom. The issue of bottleneck congestion over the Internet backbone is not the same as with the PSTN. There are competitive options. In my view, applying extensive interconnection rules for peer-to-peer connections would hamper further network investment.

Fourth Flavor: Network Management

Let's go to the fourth flavor of Net Neutrality, issues relating to network management. Net neutrality advocates question the extent to which broadband providers have rights to manage their networks. However, the FCC *has* recognized that a network owner has a legitimate need to manage its network. It stated that its broadband principles are "subject to reasonable network management."

Network owners have made a case that they need to manage their networks for quality of service. Without such management, they would not be able to block viruses and spam, and prevent abusers from congesting their network. In addition, they argue that they should be able to reserve certain amounts of bandwidth for proprietary use. Moreover, they explain that they need to use "traffic shaping" boxes to classify traffic. A traffic shaper can categorize types of internet traffic and limit a particular use to a specified amount of bandwidth. These traffic shapers allow them to manage their network and resolve performance issues. These are legitimate fears and bases for the broadband operators to manage their networks.

Earlier I noted that the FCC has sought comment on a petition seeking a rulemaking on what constitutes "reasonable network management practices." I think such a rulemaking will bring needed clarity to the issue.

The Fifth Flavor: Premium Service Fees

Finally, the fifth flavor of Net Neutrality deals with concerns that broadband network providers will charge different tiers of prices for different speeds of service. The network providers have argued that if a certain content provider or consumer wants to pay more for faster delivery, they should meet this demand. On the other side, net neutrality advocates argue that this creates "fast lanes" for certain wealthy consumers and slow lanes for the rest of us regular Joes.

I have to be honest that this argument has baffled me. Some people are perfectly fine with mailing a letter for 41 cents with the US Post Office and having it arrive two to three days later. Other folks are in a rush and need to get their letter there faster. So they are willing to pay $12 to get their letters there overnight via Federal Express or DHL. Different users have different needs, and the market should be free to serve all needs.

Ultimately, the question is whether the existing Internet Protocol can be used without congestion of the network. If the solution is that we should build more bandwidth, somebody has to pay for that. To go back to the highway metaphor, it costs money to construct and maintain new roads or lanes. It's not an easy question of how to recover costs, but the market provides solutions. If we forbid a network operator from passing costs onto the consumer, we may truly stifle innovation and network investment. If there are bandwidth-heavy users willing to pay for more bandwidth, it makes sense to charge them more in an open market.

Minimal Regulatory Framework for the Internet

So where does this leave us? Well, when I first looked into this issue, I saw some net neutrality advocates say they wanted "minimal regulatory intervention." After engaging in communications regulation for more than a decade, I must confess that the word "minimal" is rarely used with "regulatory intervention." It is my experience that regulators often use elephant guns to shoot gnats.

Moreover, phone regulators come from the traditional common carrier framework. Common carriage was appropriate back then because the telephone market was a protected monopoly. Now, the telecommunications market has been massively infused with intermodel competition that is vibrant in most markets. Cable guys are fighting it out with telephone companies, who are in turn fighting it out with wireless companies. And then there's VoIP. Yet there's still a lot of regulatory mindsets geared more towards the prior monopoly system than the New Competition.

In my view, nothing so far suggests that we should impose a common carrier framework to the Internet. We need to be careful not to jump in and regulate the Internet like the telephone system. I want to lay out a few guiding principles that I believe policymakers and regulators should consider.

1) Market Structures Have Promoted the Growth of the Internet

First, let's remember that a free market structure has promoted the growth of the Internet. The Internet is a tremendous success story. The government has used forbearance in regulating the Internet, and it has worked. There are more broadband options than ever before. There is no scarcity of content or applications on the Internet. In this age of Amazon.com, Ebay, Google, MySpace, and YouTube, there are more service providers, applications, and content out there than you could ever digest.

The broadband market is robustly competitive. According to recent FCC data, there are almost 1,400 broadband providers in the country. As of December 2006, there were 82.5 million broadband lines in service across the nation. This is a jump of 61% in subscribership over 12 months. These providers offer access to the Internet in a variety of ways: cable modem, DSL, fiber-optic, and wireless. Over 80% of residents have access to four or more broadband providers.

Further, providers continue to build out the network and invest in upgrading systems to increase speeds and bandwidth. This week, the FCC began its 700 MHZ auction– which will provide open access to the upper band. If our goal is to encourage innovation, network investment, and competition, we need to take a measured approach that does not interfere.

2) Identify Real Problems, Not Theoretical "What Ifs"

Let's identify real problems, and not theoretical "what ifs". I've pointed to the *Madison River* case as an instance in which the FCC stepped in and ultimately, prevented the company from abusing the freedoms its has to operate its network. It looks like the FCC is doing the same with this new Comcast/BitTorrent issue.

In general, the market has organically come up with solutions for network management. In the past year, there has been a 1,000% increase in videos being uploaded and downloaded on the Internet. Some academic libraries have instituted bandwidth quotas for users. Network operators offer special packages for videogamers and those who require large bandwidth. Those who use the Internet nominally, to check email or occasionally surf, pay less. These network management approaches have evolved through the marketplace – and not through government regulation.

Where there may be problems, the FCC will investigate. I will be carefully watching the network-neutrality related items that the FCC has pending before it, as I am sure you will.

3) Apply the Least Intrusive Regulatory Approach to Resolve Actual Problems

Finally, if there is a real problem, let's apply the least intrusive regulatory approach to resolve actual problems. The *Madison River* case is how we should deal with market abuses -- on a case-by-case basis. Any efforts to impose legislation proactively, or to apply traditional common carrier regulations onto the Internet, are premature. The FTC – that other federal agency that monitors the Internet and the market – recently studied the Internet market. It found that consumer demand for broadband is growing; access speeds are increasing; prices are falling; and new entrants are challenging incumbent cable and telecom companies. The FTC recommends proceeding cautiously with regard to net neutrality. I urge the same.

Conclusion

In closing, I want to reiterate my belief that all is well and healthy on the Internet. Next-generation broadband networks are being built to meet the ever-increasing thirst for bandwidth. Consumers continue to have more options for accessing the network. New websites and applications continue to be born daily.

Any attempt to impose archaic regulatory structures onto this dynamic market is a mistake. Things move fast in the Internet world. Let's not clog traffic with unnecessary regulations. Thank you again for having me here.